

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1–23. (Cancelled)

24. (New) An alphabetic character inputting device based on an array of 3x4 keypad buttons of a phone, using a character inputting interface, comprising:
a keypad including a plurality of key buttons to which alphabetic characters are assigned in such a manner that alphabetic characters which are found on adjacent keys in a QWERTY keyboard are arranged on one or adjacent key buttons in the keypad by dividing alphabetic characters into a Group I for left hand inputting and a Group II for right hand inputting on the QWERTY keyboard and into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one alphabetic character from each Character Set to form character combinations, and distributing these character combinations over the key buttons such that the alphabetic characters of Group I are arranged in a left column or a middle column of the keypad array and the alphabetic characters of Group II are arranged in a right column or a middle column of the keypad array; and

an input key processing unit for processing the character inputting operation through the keypad and outputting corresponding characters.

25. (New) The alphabetic character inputting device as set forth in claim 24, wherein the Group I consists of characters ‘Q’, ‘W’, ‘E’, ‘R’, ‘T’, ‘A’, ‘S’, ‘D’, ‘F’, ‘G’, ‘Z’, ‘X’, ‘C’, ‘V’ and ‘B’, which are assigned to numeral key buttons ‘1’, ‘2’, ‘4’, ‘5’, ‘7’, and ‘8’, and the Group II consists of characters ‘Y’, ‘U’, ‘I’, ‘O’, ‘P’, ‘H’, ‘J’, ‘K’, ‘L’, ‘N’, and ‘M’, which are assigned to numeral key buttons ‘2’, ‘3’, ‘5’, ‘6’, ‘8’, and ‘9’, such that at least one character is assigned to each key button.

26. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘E’, ‘W’, ‘Q’, ‘A’, ‘D’, ‘Z’, ‘S’, ‘C’, and ‘X’ are assigned to numeral key buttons ‘1’, ‘4’, and ‘7’ which are in the left column of the keypad, such that at least one character is assigned to each key button.

27. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘T’, ‘F’, ‘Y’, ‘R’, ‘G’, ‘V’, ‘H’, ‘U’, and ‘B’ are assigned to numeral key buttons ‘2’, ‘5’, and ‘8’, which are in the middle column of the keypad, such that at least one character is assigned to each key button.

28. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘O’, ‘P’, ‘I’, ‘L’, ‘J’, ‘N’, ‘M’, and ‘K’ are assigned to numeral key buttons ‘3’, ‘6’, and ‘9’, which are in the right column of the keypad, such that at least one character is assigned to each key button.

29. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘E’, ‘A’, and ‘S’ are respectively assigned to three different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons ‘1’, ‘4’, and ‘7’.

30. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘A’ and ‘S’ are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons ‘4’ and ‘7’.

31. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘E’, ‘A’, and ‘S’ are assigned to numeral key buttons ‘1’, ‘4’ and ‘7’, respectively.

32. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘T’ and ‘R’ are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons ‘2’ and ‘5’.

33. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘T’, ‘R’ and ‘H’ are assigned to numeral key buttons ‘2’, ‘5’ and ‘8’, respectively.

34. (New) The alphabetic character inputting device as set forth in claim 24,

wherein the characters ‘O’ and ‘I’ are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons ‘3’ and ‘6’.

35. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘O’, ‘I’, and ‘N’ are assigned to numeral key buttons ‘3’, ‘6’ and ‘9’, respectively.

36. (New) The alphabetic character inputting device as set forth in claim 24, wherein the 1st Character Set is an assembly of the most frequently used characters and comprises characters ‘A’, ‘E’, ‘H’, ‘I’, ‘N’, ‘O’, ‘R’, ‘S’, and ‘T’, each of which is inputted using a single key button operation.

37. (New) The alphabetic character inputting device as set forth in claim 24, wherein the 2nd Character Set consists of characters ‘C’, ‘D’, ‘F’, ‘G’, ‘L’, ‘M’, ‘P’, ‘U’, and ‘W’ and the 3rd Character Set consists of characters ‘B’, ‘J’, ‘K’, ‘Q’, ‘V’, ‘X’, ‘Y’, and ‘Z’.

38. (New) The alphabetic character inputting device as set forth in claim 24, wherein all of the characters ‘E’, ‘W’, and ‘Q’ are assigned to the numeral key button ‘1’ and the character ‘E’ is inputted using a single key button operation.

39. (New) The alphabetic character inputting device as set forth in claim 24, wherein both of the characters ‘O’ and ‘P’ are assigned to the numeral key button ‘3’ and the character ‘O’ is inputted using a single key button operation.

40. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘D’, ‘C’, and ‘X’ are assigned to numeral key buttons ‘4’ and ‘7’, the characters ‘L’, ‘J’, ‘M’, and ‘K’ to numeral key buttons ‘6’ and ‘9’, and the characters ‘F’, ‘G’, ‘V’, and ‘B’ to numeral key buttons ‘2’, ‘5’ and ‘8’, such that at least one character is assigned to each key button.

41. (New) The alphabetic character inputting device as set forth in claim 24, wherein the characters ‘T’, ‘H’ and ‘E’ are assigned to numeral key buttons ‘2’, ‘8’ and ‘1’, respectively, and each of the characters is inputted using a single operation of the

corresponding key button.

42. (New) The alphabetic character inputting device as set forth in claim 24, wherein all of the characters ‘E’, ‘W’ and ‘Q’ are assigned to the numeral key button ‘1’, all of the characters ‘A’, ‘D’, and ‘Z’ are assigned to the numeral key button ‘4’, and all of the characters ‘S’, ‘C’ and ‘X’ are assigned to the numeral key button ‘7’.

43. (New) The alphabetic character inputting device as set forth in claim 24, wherein all of the characters ‘T’, ‘F’ and ‘Y’ are assigned to the numeral key button ‘2’, all of the characters ‘R’, ‘G’ and ‘V’ are assigned to the numeral key button ‘5’, and all of the characters ‘H’, ‘U’ and ‘B’ are assigned to the numeral key button ‘8’.

44. (New) The alphabetic character inputting device as set forth in claim 24, wherein both of the characters ‘O’ and ‘P’ are assigned to the numeral key button ‘3’, all of the characters ‘I’, ‘L’ and ‘J’ are assigned to the numeral key button ‘6’, and all of the characters ‘N’, ‘M’ and ‘K’ are assigned to the numeral key button ‘9’.

45. (New) The alphabetic character inputting device as set forth in claim 24, wherein when a predetermined key button is pressed during the inputting of characters using the keypad, the input key processing unit alters the keypad from a character input mode to a symbol input mode to provide an array of symbols for processing symbol inputting operation through the keypad, and returning to the previous character input mode after the input of a symbol.

46. (New) The alphabetic character inputting device as set forth in any of claim 24, wherein the input key processing unit displays a currently active keypad array on a screen and outputs characters and symbols in response to key inputs corresponding to the characters or symbols.

47. (New) A symbol character inputting device, based on a keypad including a plurality of key buttons to each of which is assigned a numeral, wherein symbol characters are arranged on the key buttons in consideration of the shape of symbols and numerals by dividing symbol characters into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one symbol character from each Character Set to form symbol character combinations, and distributing these symbol

character combinations over the key buttons; and

an input key processing unit for processing the character inputting operation through the keypad and outputting corresponding symbol characters.

48. (New) The symbol character inputting device as set forth in claim 47, wherein the 1st Character Set is an assembly of the most frequently used symbol characters and comprises symbol characters ‘!’, ‘?’, ‘-’, ‘“’, ‘”’, ‘@’, ‘;’, ‘:’, ‘,’ and ‘.’, each of which is inputted using a single key button operation.

49. (New) The symbol character inputting device as set forth in claim 47, wherein the 2nd Character Set comprises the symbol characters ‘/’, ‘~’, ‘+’, ‘=’, ‘<’, ‘>’, ‘(’, ‘)’ and ‘&’ and the 3rd Character Set comprises the symbol characters ‘\’, ‘|’, ‘[’, ‘]’, ‘_’, ‘{’, ‘}’ and ‘\$’.

50. (New) The symbol character inputting device as set forth in claim 47, wherein when a predetermined key button is pressed during the inputting of characters using the keypad, the input key processing unit alters the keypad from a character or numeral input mode to a symbol input mode to provide an array of symbols for processing symbol inputting operation through the keypad, and returning to the previous character or numeral input mode after the input of a symbol.

51. (New) The symbol character inputting device as set forth in claim 50, wherein the predetermined key button is the key button ‘*’.

52. (New) The symbol character inputting device as set forth in claim 47, wherein the symbol characters ‘!’ and ‘?’ are respectively assigned to numeral key buttons ‘1’ and ‘2’.

53. (New) The symbol character inputting device as set forth in claim 47, wherein the symbol characters ‘<’ and ‘>’ are respectively assigned to the numeral key buttons ‘4’ and ‘7’.

54. (New) The symbol character inputting device as set forth in claim 47, wherein the symbol characters ‘(’ and ‘)’ are respectively assigned to the numeral key buttons ‘6’ and ‘9’.

55. (New) The symbol character inputting device as set forth in claim 47, wherein the symbol characters ‘‘’ and ‘“’ are respectively assigned to the numeral key buttons ‘4’ and ‘5’.

56. (New) The symbol character inputting device as set forth in claim 47, wherein the symbol characters ‘;’, ‘:’, ‘,’ and ‘.’ are respectively assigned to the numeral key buttons ‘7’, ‘8’, ‘9’ and ‘0’.

57. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘1’, ‘!’, and ‘/’ are assigned to the same key button.

58. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘2’, ‘?’ and ‘~’ are assigned to the same key button.

59. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘4’, ‘“’, and ‘<’ are assigned to the same key button.

60. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘5’, ‘“’, and ‘=’ are assigned to the same key button.

61. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘6’, ‘@’, and ‘(’ are assigned to the same key button.

62. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘7’, ‘;’, and ‘>’ are assigned to the same key button.

63. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘8’, ‘:’, and ‘&’ are assigned to the same key button.

64. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘9’, ‘,’ and ‘)’ are assigned to the same key button.

65. (New) The symbol character inputting device as set forth in claim 47, wherein the characters ‘0’ and ‘.’ are assigned to the same key button.

66. (New) The symbol character inputting device as set forth in claim 47, wherein the characters '[' and '{' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '4' and '6', and the characters ']' and '}' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '7' and '9'.

67. (New) The symbol character inputting device as set forth in one of claims 47, wherein the input key processing unit displays a currently active keypad array on a screen and outputs characters and symbols in response to key inputs corresponding to the characters or symbols.

68. (New) A method for inputting alphabetic characters through a character inputting interface based on an array of 3x4 keypad buttons of a phone, comprising:

inputting alphabetic characters using a keypad, said keypad including a plurality of key buttons on which alphabetic characters are assigned in such a manner that alphabetic characters which are found on adjacent keys in a QWERTY keyboard are arranged on one or adjacent key buttons in the keypad by dividing alphabetic characters into a Group I for left hand inputting and a Group II for right hand inputting on the QWERTY keyboard and into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one alphabetic character from each Character Set to form character combinations, and distributing these character combinations over the key buttons such that the alphabetic characters of Group I are arranged in a left column or a middle column of the keypad array and the alphabetic characters of Group II are arranged in a right column or a middle column of the keypad array; and

processing the signals inputted through the keypad and outputting characters corresponding to the inputted signals.

69. (New) The method as set forth in claim 68, wherein the alphabetic characters of the 1st Character Set and the 2nd Character Set are inputted by pressing corresponding key buttons for a time that is shorter or longer than a predetermined time, respectively, and the alphabetic characters of the 3rd Character Set are inputted by pressing the key button '#' and corresponding key buttons in succession.

70. (New) A method for inputting symbol characters using a keypad including a plurality of key buttons to each of which is assigned a numeral, comprising:

inputting symbol characters by use of the keypad on which the symbol characters are arranged in consideration of the shape of symbols and numerals by dividing symbol characters into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one symbol character from each Character Set to form symbol character combinations, and distributing these symbol character combinations over the key buttons; and

processing the signals inputted through the keypad and outputting characters corresponding to the inputted signals.

71. (New) The method as set forth in claim 70, wherein the symbol characters of the 1st Character Set and the 2nd Character Set are inputted by pressing corresponding key buttons for a time that is shorter or longer than a predetermined time, respectively, and the alphabetic characters of the 3rd Character Set are inputted by pressing the key button ‘#’ and corresponding key buttons in succession.